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AUTHOR Cillessen, Antonius H. N.; And Others
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ABSTRACT

A study was conducted to test the effects of early consistent rejection by peers in early elementary school on children's social and emotional adjustment at the end of elementary school. The study used data from a longitudinal study conducted in the Netherlands between 1986 and 1991. In 1986, a total of 231 kindergarten and first-grade boys from 37 elementary schools were contacted. For the second contact in 1987, a total of 99 percent of the original sample was still participating, and 80 percent participated in the final contact 4 years later. Study measures included sociometric screening to determine whether the boys were rejected, popular, neglected, controversial, or average. Also included were various assessments of the boys' social and emotional adjustment; a questionnaire to assess bullying and victimization problems; and a depression scale for children. It was found that boys who were consistently rejected in early elementary school were more likely than other boys to become victims of other children's aggression; to develop feelings of loneliness; and to show signs of depression. Consistent rejection also predicted less prosocial behavior and more behavior indicative of withdrawal and bullying. The effects of rejection were found even when earlier aggression and shyness were controlled for. Loneliness could be predicted from depression, concurrent rejection, and earlier depression. Early consistent rejection appears to be a risk factor for the development of internalizing disorder. Implications of the research and recommendations for further study are included. (Nine tables/figures are attached.) (AC)

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Children's Problems Caused by Consistent Rejection in Early Elementary School

Antonius H. N. Cillessen

Duke University

Cornelis F. M. Van Lieshout

Gerbert J. T. Haselager

University of Nijmegen

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Children's Problems Caused by Consistent Rejection

in Early Elementary School

The purpose of this paper is to test the effects of early consistent rejection by peers in early elementary school on children's social and emotional adjustment at the end of elementary school. Many previous studies have indicated that peer rejection or low social acceptance is predictive of later social adjustment problems, both externalizing problems and internalizing problems. The predictive importance of poor peer relations became particularly clear from the research reviews that were conducted by Parker and Asher and by Kupersmidt, Coie, and Dodge. Recent studies such as the ones presented by my colleagues in this symposium today further contribute to and refine this knowledge base. I would like to start my presentation by repeating the two models that Parker and Asher distinguished in 1987 to explain the connection between peer rejection or low peer acceptance and social adjustment problems in later life. In what Parker and Asher called an incidental model (slide 1), peer rejection is the consequence of an underlying disorder and it is the underlying disorder that also causes later problems. For example, a child may be rejected by his or her peers because he or she is aggressive. This child's aggressive tendencies in interactions with others may then also be the primary cause for the development of such problems as delinquent behavior. In that case, the link between aggression and delinquency needs to be further described and researchers such as Rolf Loeber have proposed different developmental models that serve that purpose. The second model for the relation between poor peer relations and later adjustment is called a causal model (slide 2). In this model, being rejected in itself has certain implications that have negative consequences. For example, when the aggressive

child just mentioned is being rejected and avoided by others, he or she will also be excluded from important opportunities that interactions with other children offer to learn a variety of essential social skills. The lack of knowledge of such skills may then be an element in a causal chain toward further problems. As this example illustrates, the incidental model and the causal model can be operative at the same time.

The studies that have linked rejection to later problems have usually used rejection measured at one point in time as the predictor of later outcome. However, not all children who are rejected at a certain point in time are still rejected when their sociometric status is reassessed at a later point in time. That is, rejection is not perfectly stable from one point in time to the next. From a methodological perspective, this has lead some researchers to suggest that reliable assessment of peer problems requires repeated sociometric screening, or requires the addition of alternative measures of peer problems if only one measurement point is available. Although the stability of rejection is not perfect, a significant number of rejected children do maintain their rejected status over time and some children remain rejected over several consecutive school years. From a clinical perspective, we believe that children who are consistently classified as rejected over time are an important group to focus on. Given that rejection at one point in time predicts later problems, we expect these possible future problems to be more serious if a child is classified as rejected at more than one point in time, that is, if a child is consistently rejected, as compared to being only temporarily rejected or not rejected at all.

This expectation about the importance of consistent rejection can be understood in terms of the incidental model as well as the causal model of the

link between peer rejection and later adjustment problems. In an incidental model, the increased risk of consistently rejected children reflects that fact that they consistently have high levels of the underlying disorder. They may be the more extreme cases on the continuous distribution of the underlying disorder that leads to rejection by peers. In a causal model, the increased risk of consistently rejected children means that these children are repeatedly subjected to the 'effective agents' or the developmentally impairing elements that are present in the experience of being rejected, avoided, and excluded from peer interaction. For this case in particular, Parker and Asher suggested that chronic rejection may lead to feelings of loneliness, followed by the development of symptoms of depression. In either model the risk of rejection is considered to be greater if the rejection is more prolonged, consistent, or chronic. Consequently, we hypothesize that consistency of rejection should be predictively related to the degree with which negative outcomes occur at a later point in time. The purpose of this paper is to test this hypothesis.

To this purpose, we used measures from a longitudinal study that was conducted in The Netherlands and started in 1986. In 1986, Time 1, 231 boys from 37 different elementary schools were contacted when they were in kindergarten or first grade. Time 2 followed one year later in 1987 and Time 3 followed four years after Time 2. The next table (slide 3) shows the total number of boys in the sample at each of the three measurement times. The attrition rate in this study was low. Ninety-nine percent of the original sample participated at Time 2, and 80% of the original sample still participated at Time 3. This table also shows the age distribution of the subjects at each measurement point. Most of the boys in the sample were 5, 6, or 7 years at Time 1. Some heterogeneity

existed, however, at both sides of the age distribution. At the low end, this heterogeneity was caused by the fact that kindergarten in The Netherlands is a two-year program into which children can enter when they are four years old. Consequently, there were some four-year-old boys in the sample. At the high end of the distribution, heterogeneity was caused by the fact that there were a few small schools involved in the study that had their first grade mixed with second or third grade. This caused the inclusion of some boys older than seven in the sample. At Time 2, most of the boys in the sample were between 6 and 8, and at Time 3, most of the boys were between 10 and 12.

As appears from the ages of the subjects at each of the three measurement points, this longitudinal study covers the elementary-school age span. Recently published studies have made predictions from peer relation problems assessed half-way through elementary school into early adolescence, but not many studies have made predictions from peer relationship problems assessed at an earlier age. The problems of rejection, however, may start to accumulate as soon as a child begins to enter peer groups on a systematic basis when he or she goes to kindergarten. In the present study, we are able to make predictions from consistent rejection taking place in early elementary school to the quality of children's social and emotional adjustment at the end of elementary school.

The next slide (slide 4) shows the measures that we used for the purpose of this study. Sociometric screening took place at each of the three waves of data collection and yielded the classification of each child as rejected or belonging to the remaining status categories popular, neglected, controversial, or average. Considering the young age of the subjects at Time 1 and Time 2, we used the method of Asher, Singleton, Tinsley, and Hymel (1979) in which each

child in a class rates each other child as liked, neutral, or disliked. This method has proven to be particularly reliable for young children. Since there is no restriction as to the number of peers that a child can name as liked or disliked, this is a method of unlimited nominations. At Time 3, when the children in the sample were older, we used limited nominations for liked most and liked least. In both cases, the probability model developed by Newcomb and Bukowski to assign subjects to sociometric status categories was used.

In addition to the status classification at Time 3, measures were collected for different aspects of children's social and emotional adjustment. Three sets of measures were used. The first set of measures were peer nominations in the classroom for nine social-interactive behaviors. A behavioral exemplar was given for each of the nine behaviors, and for each exemplar each child in a class named three classmates that best fitted the description of that behavior. Peer nominations were asked for three antisocial behaviors (starts fights, disrupts play, bullies other kids), for three behaviors reflecting shy or withdrawn behavior (is shy, seeks help, is bullied by other kids), and three items reflecting prosocial peer interaction (cooperates and shares, offers help, is a friend). For each behavior the total number of nominations received was computed for each child, which was then standardized within classroom. Finally, an average standard score for antisocial behavior, shyness/withdrawal, and prosocial behavior was computed across the three items in each category.

The second set of measures were derived from a questionnaire developed by Olweus to assess bully/victim problems among schoolchildren in Scandinavia. The rationale for the use of this questionnaire was as follows. Externalizing problems such as delinquency and drug abuse are not prevalent yet in the age

group studied, nor is screening of police reports useful. Bully/victim problems at the end of elementary school, the age when they become particularly salient, form an essential aspect of the peer group experience at this age, and may be crucial early expressions of later forms of externalizing problems. Olweus' questionnaire was translated to be used with Dutch schoolchildren. The Olweus questionnaire is a self-report instrument and consists of a variety of items asking children about their experiences with peers in school. The three main subscales derived from this instrument measure bullying, victimization, and social isolation or loneliness. The bullying scale contains questions about the frequency with which the child bullies peers or participates in bullying activities in school. The victimization scale contains items measuring the frequency with which a child is the victim of bullying by others in different contexts and at different times. The social isolation scale measures the child's lack of friends and feelings of loneliness in school. All items are five-point ratings and the final scores are averages across the items in the scale.

The third set of measures were taken from a measure of depression in children. We used a depression scale that has been developed and standardized in The Netherlands to assess depression in children. This depression scale is a 46-item instrument. Each item describes an emotion or characteristic that is indicative of depression in children; a subject indicates whether or not each item is true or not true for himself or herself. The scale has demonstrated excellent psychometric properties and has been extensively validated among elementary-school-aged children in The Netherlands. A total depression score is computed by counting the number of items that are scored as true. In addition to the total depression score, four subscales measuring four components of

depression are represented in the scale. The first subscale measures the affective manifestations of depression. It measures the extent to which the child has feelings of unhappiness, sadness, or feels incapable to enjoy things in life. The second subscale measures the motivational manifestation of depression. It assesses the extent to which the child demonstrates such things as a reduction of activity and regressive behavior. The third component measures the occurrence of physical complaints indicative of depression in children. The fourth and final component captures the child's negative self evaluations.

Before analyzing the prediction of the outcome variables by previous rejection, we first looked at the concurrent relations between rejection and the criterion variables assessed at Time 3. The next slide (slide 5) shows the means of the outcome variable for rejected boys and for the sociometrically average and popular boys as comparison groups at Time 3. Analyses of variance yielded a group effect for each variable except for victimization, where the effect was marginally significant ($p < .09$). Subsequent post hoc comparisons replicated the usual results for peer nominations: Compared to average boys, rejected boys were significantly more frequently nominated for antisocial and shy or withdrawn behavior, and significantly less for prosocial behaviors. Note, however, an interesting characteristic of this rejected group. The group as a whole scores remarkably high on antisocial behavior. In fact, the group mean is higher than one standard deviation above the mean, and this was also true for each of the three items in this scale. The mean score on shyness/withdrawal, although significantly higher than the average group, is comparatively low. In terms of subgroups of rejection, this rejected group apparently consists of more aggressive-rejected boys and less withdrawn-rejected boys than usual. This is

also reflected in the fact that the rejected group scored higher than average on bullying, but did not score higher than average on victimization. Perry has shown that both bullies and victims are rejected, and in a less uniformly aggressive group of rejected boys we would have expected victimization also to be significantly higher than average. In spite of the relatively high level of antisocial behavior of this rejected group, rejected boys reported significantly more loneliness and depression than average boys. This is particularly interesting since loneliness and depression have usually been thought of as typical for the pathways of withdrawn-rejected boys. This result points to the importance of loneliness and depression as outcome variables related to rejection and possibly also as variables influenced by early consistent rejection.

In order to test for the effect of earlier consistent rejection, we needed a measure of the consistency of rejection. The sample at Time 1 contained 81 rejected boys. Fifty-one percent of them were also rejected at Time 2. Of all rejected boys at Time 2, 64% was rejected at Time 1. Across the one-year interval, three groups were identified: consistent-rejected boys (both years), temporary-rejected boys (in one year, not the other), and nonrejected boys. A score for the consistency of rejection was now created by simply counting for each subject the number of times he had been classified as rejected across Time 1 and Time 2. This score thus ranged from 0 to 2: 0 for nonrejected boys, 1 for temporary-rejected boys, and 2 for consistent-rejected boys.

To test for the effect of early consistent rejection, we conducted a separate stepwise regression analysis for each Time 3 outcome variable with consistency of rejection across Time 1 and Time 2 as the predictor. In addition, three other predictors were added to each regression equation. First,

considering the age heterogeneity of the sample, it is very plausible to expect that the effects of consistency of rejection interact with the subject's age. In fact, we would expect the effect of consistency of rejection to be stronger for older children than for younger children. Thus, we included the interaction between consistency of rejection and age as a predictor in the regression. Second, we wanted to control for the child's previous levels of aggression and shyness, the two behavioral dimensions most frequently related to rejection, in order to rule out the possibility that they explain any possible relation between consistent rejection and later outcome variables. We might say that this is to exclude an 'incidental' explanation for the prediction of outcome variables. Standard scores for peer nominations of aggression and shyness were available at Time 2 and we used those for this purpose. Thus previous measures of aggression and shyness were also included. In sum, we conducted a stepwise regression for each Time 3 outcome variable as the criterion with four predictors: Consistency of rejection across Time 1 and Time 2, the interaction of consistency of rejection with age, previous aggression, and previous shyness.

The next slide (slide 6) shows the results of the regressions in a summary table. The regressions demonstrated the following pattern of results. Significant predictions to the peer nomination scales were followed up by an examination of the zero-order correlations between the predictor and the items of the composite. Antisocial behavior at the end of elementary school was significantly predicted by previous aggression ($R^2 = .18$, $T = 6.65$, $p < .001$). The correlations of previous aggression with the items of the antisocial behavior scale were .40 for starts fights, .38 for disrupts play, and .39 for bullies other kids (all p's $< .01$). Previous shyness also made a small but significant

contribution to the prediction of later antisocial behavior (R^2 = .02, T = 2.03, p < .043). However, the correlations of previous shyness with the items of the antisocial scale were not significant (r's = .03, .10, and .01 for starts fights, disrupts play, and bullies other kids, respectively).

Shyness/withdrawal at the end of elementary school was significantly predicted by consistent rejection at the beginning of elementary school (R^2 = .06, T = 3.34, p < .001). The correlations of consistent rejection with the items of the shyness/withdrawal composite were -.01 (n.s.) for shyness, .21 (p < .01) for seeks help, and .24 (p < .01) for is bullied by other kids.

Prosocial behavior at the end of elementary school was negatively predicted by early consistent rejection (R^2 = .12, T = -5.04, p < .001) and previous shyness (R^2 = .05, T = -3.33, p < .001). The correlations of early consistent rejection with the items of the prosocial scale were -.34 (p < .01) for cooperates and shares, -.25 (p < .01) for offers help, and -.31 (p < .01) for is a friend. The correlations of previous shyness with the items of the prosocial scale were -.21 (p < .01) for cooperates and shares, -.22 (p < .01) for offers help, and -.18 (p < .05) for is a friend.

Self-reported bullying at the end of elementary school was predicted by the interaction between early consistent rejection and age (R^2 = .07, T = 3.65, p < .001). The combination of high levels of consistency and age predicted the occurrence of later bullying. Self-reported victimization, experienced loneliness, and depression at the end of elementary school were all predicted by consistent rejection at the beginning of elementary school. The R^2's for these three outcome variables were .05 (T = 2.98, p < .003) for victimization, .03 (T = 2.21, p < .028) for loneliness, and .02 (T = 2.04, p < .043) for depression.

In summary, clear evidence was found for a predictive relation between early consistent rejection and criterion measures assessed after a four-year interval. Consistent rejection primarily predicted victimization, loneliness, and depression. It also predicted lower prosocial behavior and behavior indicative of withdrawal. Consistent rejection also predicted bullying and this effect was stronger when subjects were older. The effects of the consistency of rejection were found even when we were controlling for earlier aggression and shyness, the two behavioral dimensions most frequently associated with rejection. Earlier aggression itself predicted later antisocial behavior; earlier shyness predicted low prosocial behavior and contributed to the prediction of later antisocial behavior.

The most important result from these analyses is that boys who were consistently rejected in early elementary school had a higher chance than other boys to become the victims of other children's aggression, to develop feelings of loneliness and to show signs of depression. Early consistent rejection appears to be a risk factor for the development of internalizing disorder. Parker and Asher suggested that children without social support from peers are, over the long term, at risk for feelings of extreme loneliness or even depression. Our results show that when this lack of peer support takes the form of active rejection, depression is a very predictable outcome. Implicit in such an explanation is the idea that the effect of rejection on depression is mediated by feelings of loneliness. Additional regressions using Time 2 and Time 3 data demonstrated that this was the case in our data. Loneliness could be predicted from depression, concurrent rejection, and earlier rejection. Depression was of course equally predictable from loneliness as loneliness was from depression, but

depression was not predicted by either concurrent or previous rejection after loneliness had entered the regression equation first. The zero-order and partial correlations among rejection, loneliness, and depression at Time 3 (slide 7) indicated that the link between rejection and depression disappeared when we controlled for loneliness. Although we have not conclusively demonstrated the causal connections, all results point to a pathway from rejection, especially when extended over time, to loneliness, and then to depression.

The prediction of depression from consistent rejection for boys is particularly remarkable, since internalizing problems are less frequently found in boys than in girls. This prediction is also remarkable, since it took place over a four-year interval from a time in early elementary school when many aspects of children's social and emotional development are still very unstable. The increased risk of consistent-rejected children for the development of signs of depression points to the importance of conducting repeated sociometric screening in early elementary school. A child that is consistently rejected by his or her peers needs to be the focus of preventive intervention. Such an intervention might take the form of helping the child develop a close friendship relationship, which then may have a buffering effect against the development of feelings of loneliness and subsequent depression.

Several suggestions for further research can be made. First, measures of consistent rejection through repeated sociometric screening need to be supplemented by direct interviews with children about the length, chronicity, and degree to which they have experienced rejection by peers. Second, more detailed questions about the effects of consistent rejection need to be tested, such as whether the risk of consistent rejection increases exponentially rather than

being an additive function of the risk of separate rejection experiences, whether consistent rejection has the same effect at different ages, and what the age of onset is at which consistent rejection starts to have a negative impact. Third, in terms of increasing the scope of outcome measures, it would be highly relevant to assess whether consistent rejection, subsequent experiences of loneliness, and depression are related to poor academic competence in elementary school.

Finally, we think that the results of our study have implications for the two models for the link between rejection and later problems with which we started this paper. Parker and Asher mentioned that further refinement of these models is needed. Our study points to one possibility for such refinement, and it leads us to the following hypothesis: The two models seem to fit better for different kinds of disorder. There seems to be a relationship between the type of model and the type of disorder.

The incidental model (slide 8) seems to be the better fitting model for externalizing problems. In our data, antisocial behavior was predicted by previous aggression, but not by previous consistent rejection. Recent studies by Kupersmidt, Coie, and others demonstrated that aggression, and not rejection, is the main predictor of later externalizing problems. The causal model (slide 9) seems to be the better fitting model for internalizing problems. Earlier shyness did not predict loneliness and depression. Instead, there seemed to be a pathway from consistent rejection to loneliness and subsequent depression.

In either case, the opposite model is not excluded, but does not seem to be the prevailing one. The causal model may also apply for externalizing problems when consistent rejection leads to frustration, anger, and a subsequent increase of aggression. Although shyness did not predict later depression,

another underlying dimension such as behavioral inhibition very well may. Final answers to these possibilities can only come from research designs that include the relevant variables and that use the appropriate statistical procedures needed to estimate causal pathways. In any case, the results of our study on the consistency of rejection lead to the suggestion that the type of model for the link between rejection and problems is related to the type of disorder considered. We believe that this suggestion is an interesting one and may offer a small contribution to refining the explanations for the relation between peer rejection in childhood and later adjustment problems.

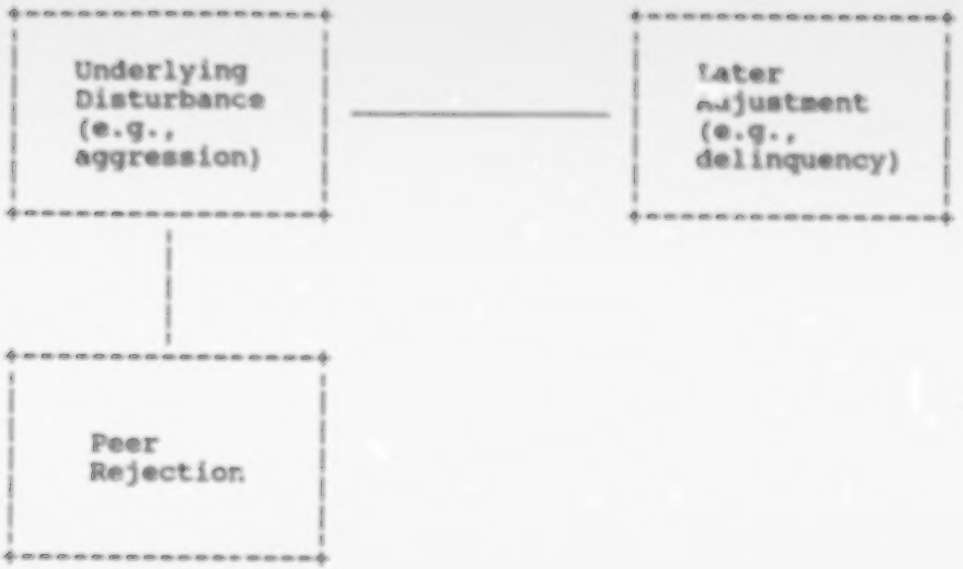

Figure 1 Incidental model of the relation between peer rejection and later adjustment problems (Parker & Asher, 1987).

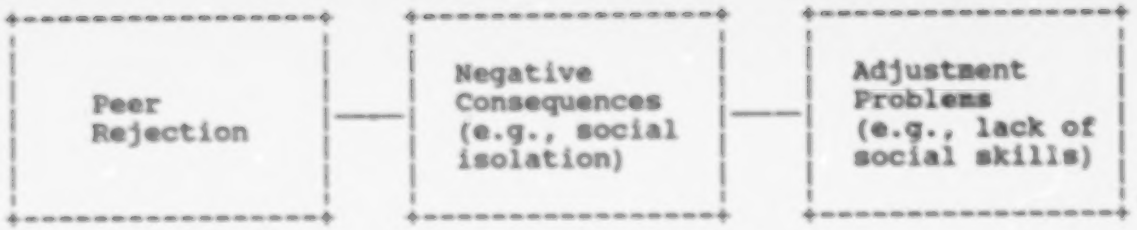

Figure 2 Causal model of the relation between peer rejection and later adjustment problems (Parker & Asher, 1987).

TABLE 1

Age of Subjects at Each Measurement Point

Time 1		Time 2		Time 3	
Age	N	Age	N	Age	N
4	15	5	15	9	1
5	63	6	62	10	49
6	55	7	48	11	44
7	88	8	90	12	68
8	9	9	12	13	18
9	1	10	1	14	1
Total	231		228		185

Overview of Measures

Time 1 --------> Time 2 --------> Time 3

Rejection Rejection Rejection

Criteria

Criteria or 'Outcome' variables

Peer Nominations

- Antisocial Behavior
- Shyness/Withdrawal
- Prosocial Behavior

Olweus' Questionnaire

- Bullying
- Victimization
- Social Isolation/Loneliness

Depression Scale

- Total Score
- Emotional Manifestations
- Motivational Manifestations
- Physical Complaints
- Negative Self Evaluations

TABLE 2

Concurrent Relations Between Peer Rejection and Outcome or Predictor Variables

	Popular	Average	Rejected
Peer Nominations			
Antisocial Behavior	.148	.087	1.284 *
Shyness/Withdrawal	-.417	-.168	.225 *
Prosocial Behavior	1.035	-.079	-.713 *
Self-report Measures			
Bullying	1.028	.984	1.356 *
Victimization	.542	.709	.907
Loneliness	.725	.921	1.159 *
Depression	6.610	9.091	12.111 *

*: Rejected versus Average $p < .05$

TABLE 3

Regression Analyses Summary Table

Peer Nominations	CON	CON * AGE	AGG	SHY
Antisocial Behavior			+	+
Shyness/Withdrawal	+			
Prosocial Behavior	-			-
Self-report Measures				
Bullying		+		
Victimization	+			
Loneliness	+			
Depression	+			

CON: Consistency of Rejection

AGE: Age of Subject

AGG: Previous Aggression

SHY: Previous Shyness

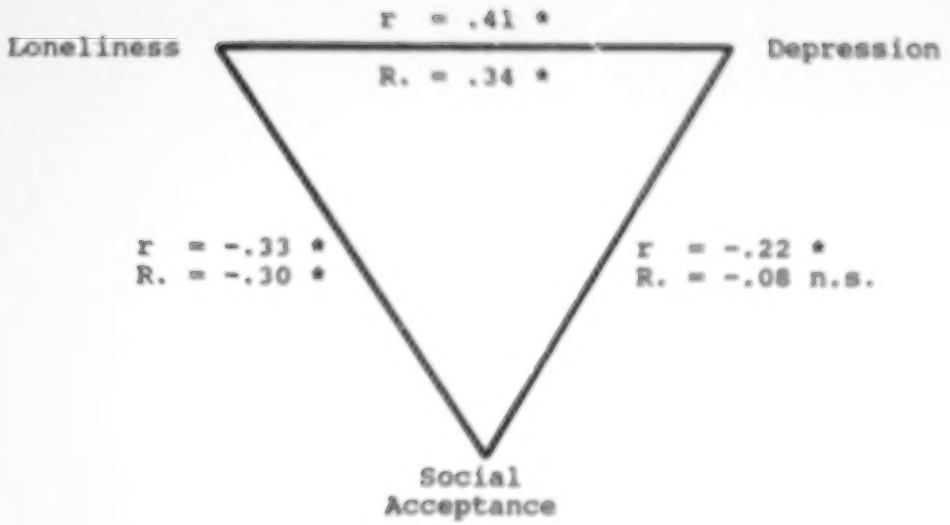

Figure 3 Zero-order and partial correlations between social acceptance, loneliness, and depression.

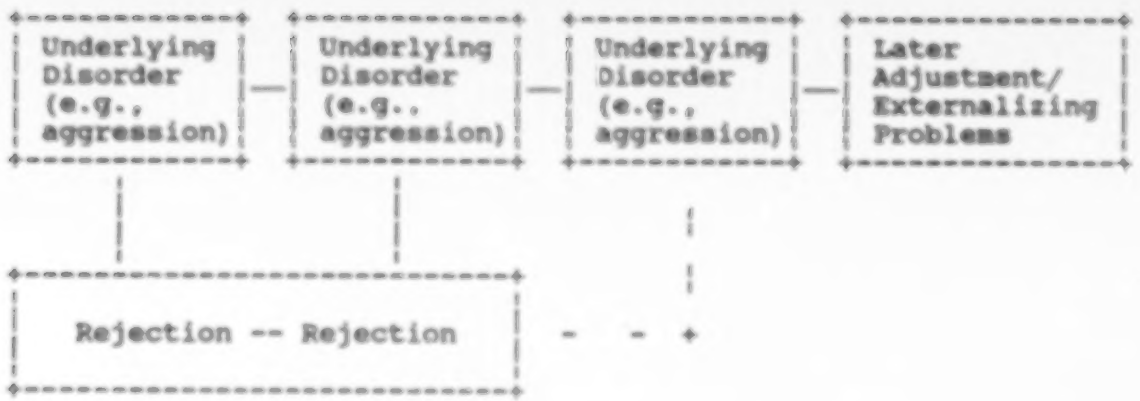

Figure 4 The role of consistent rejection in an incidental model of the relation between rejection and later problems.

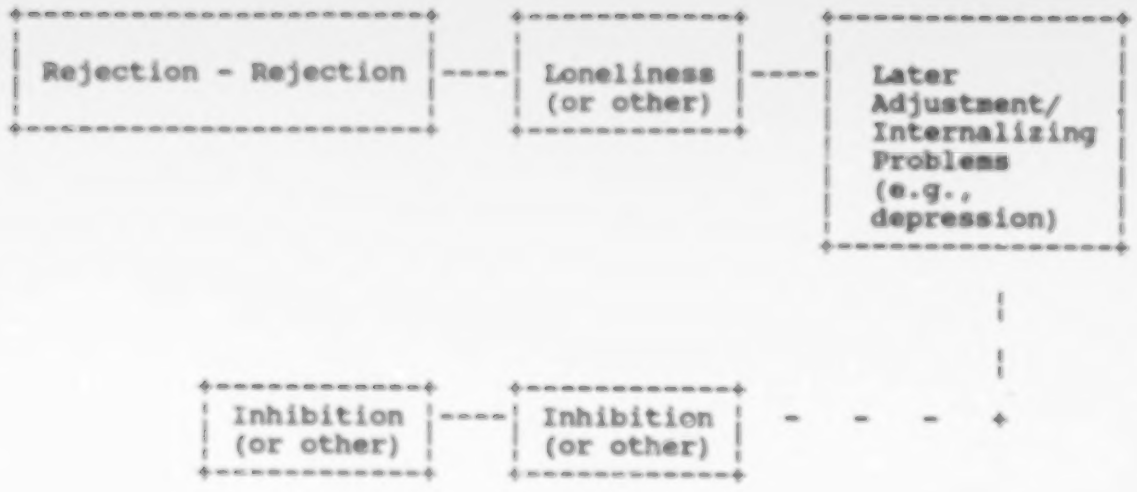

Figure 5 The role of consistent rejection in a causal model of the relation between rejection and later problems.